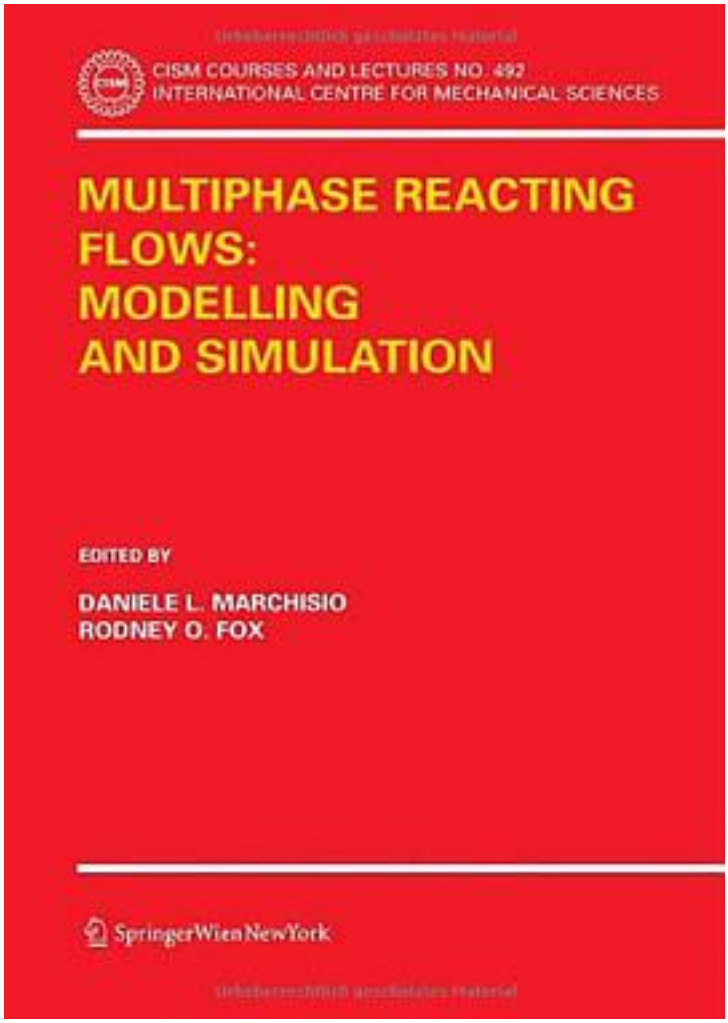
Multiphase Reacting Flows



Multiphase Reacting Flows_下载链接1_

著者:Marchisio, Daniele L. 编

出版者:Springer Verlag

出版时间:

装帧:Pap

isbn:9783211724637

The papers in this book describe the most widely applicable modeling approaches

and are organized in six groups covering from fundamentals to relevant applications. In the first part, some fundamentals of multiphase turbulent reacting flows are covered. In particular the introduction focuses on basic notions of turbulence theory in single-phase and multi-phase systems as well as on the interaction between turbulence and chemistry. In the second part, models for the physical and chemical processes involved are discussed. Among other things, particular emphasis is given to turbulence modeling strategies for multiphase flows based on the kinetic theory for granular flows. Next, the different numerical methods based on Lagrangian and/or Eulerian schemes are presented. In particular the most popular numerical approaches of computational fluid dynamics codes are described (i.e., Direct Numerical Simulation, Large Eddy Simulation, and Reynolds-Averaged Navier-Stokes approach). The book will cover particle-based methods such as lattice-Boltzmann and dissipative particle dynamics and will also discuss Eulerian-Eulerian and Eulerian-Lagrangian techniques based on finite-volume schemes. Moreover, the possibility of modeling the poly-dispersity of the secondary phases in Eulerian-Eulerian schemes by solving the population balance equation will be also discussed.

作者介绍:

目录:

标签

评论

Multiphase Reacting Flows_下载链接1_

书评

Multiphase Reacting Flows_下载链接1_